PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	09/785,511
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Applicant:	Shoji HINATA
Group Art Unit:	2871
Examiner:	Unknown
Title:	DISPLAY DEVICE SUBSTRATE, METHOD FOR MANUFACTURING THE DISPLAY DEVICE SUBSTRATE, LIQUID-CRYSTAL DISPLAY DEVICE, AND ELECTRONIC EQUIPMENT
Attorney Docket:	9319S-000190

Hon. Commissioner of Patents and Trademarks
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Sir:

Prior to the examination of this application, please amend it as follows:

IN THE CLAIMS

Please add the following new claims:

15. (NEW) A display device substrate comprising:

a display electrode that has a substantially transparent first layer;

a wiring layer connected to an end portion of the display electrode, the wiring layer including the first layer and a second layer that includes a metal material having an electric resistance lower than that of the first layer; and

a substrate where the wiring layer is arranged, the wiring layer being routed along one edge thereof.

16. (NEW) The display device substrate according to claim 15 wherein the display electrode has the second layer.

17. (NEW) The display device substrate according to claim 16 wherein the display electrode has a striped-shape, the second layer is arranged so as to be along a longitude direction of the display electrode.

18. (NEW) The display device substrate according to claim 17 wherein the second layer is arranged at an edge of the display electrode.

19. (NEW) The display device substrate according to claim 17 wherein the second layer is narrower in width than the first layer.

20. (NEW) The display device substrate according to claim 17 wherein the second layer has an opening.

21. (NEW) A liquid crystal display device comprising:

a first display electrode that has a substantially transparent first layer;

a wiring layer connected to an end portion of the first display electrode, the wiring layer including the first layer and a second layer that includes a metal material having an electric resistance lower than that of the first layer;

a substrate where the wiring is arranged, the wiring being routed along one edge thereof;

a second display electrode opposing the first display electrode; and

a liquid crystal layer positioned between the first display electrode and the second display electrode so that a voltage for driving the liquid crystal can be applied thereto.

22. (NEW) The liquid crystal display device according to claim 21 wherein the first display electrode has the second layer.

23. (NEW) The liquid crystal display device according to claim 22 wherein the first display electrode has a striped-shape, the second layer is arranged so as to be along a longitude direction of the first display electrode.

24. (NEW) The liquid crystal display device according to claim 23 wherein the second layer is arranged at an edge of the first display electrode.

25. (NEW) The liquid crystal display device according to claim 23 wherein the second layer is narrower in width than the first layer.

26. (NEW) The liquid crystal display device according to claim 23 wherein the second layer has an opening.

27. (NEW) A liquid crystal display device comprising:

a first display electrode that has a substantially transparent first layer;

a first wiring layer connected to an end portion of the first display electrode, the first wiring layer including the first layer and a second layer that includes a metal material having an electric resistance lower than that of the first layer;

a first substrate where the first display electrode and the first wiring layer are arranged, the first wiring layer is routed along one edge thereof;

a second display electrode opposing the first display electrode;

a second wiring layer connected to an end portion of the second display electrode;

a second substrate where the second display electrode is arranged; and

a liquid crystal layer positioned between the first display electrode and the second display electrode so that a voltage for driving the liquid crystal can be applied thereto.

28. (NEW) The liquid crystal display device according to claim 27 wherein both of the first wiring layer and the second wiring layer are arranged on the first substrate.

29. (NEW) The liquid crystal display device according to claim 28 wherein the other ends of the first wiring layer and second wiring layer are aligned proximate another edge of the first substrate.

30. (NEW) A liquid crystal display device comprising:

a first display electrode including Indium Tin Oxide;

a wiring layer connected to an end portion of the first display electrode, including a metal material having an electric resistance lower than the Indium Tin Oxide;

a substrate where the wiring layer is arranged, the wiring layer being routed along one edge thereof;

a second display electrode opposing the first display electrode; and

a liquid crystal layer positioned between the first display electrode and the second display electrode so that a voltage for driving the liquid crystal can be applied thereto.

31. (NEW) A liquid crystal display device comprising:

a first display electrode that has a first layer including a material selected from a group consisting of Tin Oxide and Indium Tin Oxide;

a wiring layer connected to the first display electrode, the wiring layer

including the first layer and a second layer which includes a metal selected from a group consisting of copper, silver, gold and chromium;

a substrate where the wiring layer is arranged, the wiring layer being routed along one edge thereof;

a second display electrode opposing the first display electrode; and

a liquid crystal layer positioned between the first display electrode and the second display electrode so that a voltage for driving the liquid crystal can be applied thereto.

32. (NEW) A liquid crystal display device comprising:

a first display electrode including Indium Tin Oxide;

a wiring layer connected to the first display electrode, the wiring layer including a metal material having an electric resistance lower than the Indium Tin Oxide;

a substrate where the wiring layer is arranged, the wiring layer being routed along one edge thereof;

a second display electrode opposing the first display electrode; and

a liquid crystal layer positioned between the first display electrode and the second display electrode so that a voltage for driving the liquid crystal can be applied thereto.

33. (NEW) A liquid crystal display device comprising:

a first display electrode that has a substantially transparent first layer;

a wiring layer connected to the first display electrode, the wiring layer

including the first layer and a second layer that includes a metal material having an electric resistance lower than that of the first layer;

a substrate where the wiring is arranged, the wiring layer being routed along one edge thereof;

a second display electrode opposing the first display electrode;

a switching element connected to the second display electrode; and

a liquid crystal layer positioned between the first display electrode and the second display electrode so that a voltage for driving the liquid crystal can be applied thereto.

34. (NEW) The liquid crystal display device according to claim 33 wherein the switching element is one of a two-terminal-type element and a three-terminal-type element.

35. (NEW) The liquid crystal display device according to claim 33 wherein the second layer has an opening.

REMARKS

The purpose of this preliminary amendment is to add new claims. Please note that the original application filed on February 16, 2001, included two claims numbered 13. Applicant assumes that these claims will be renumbered 13 and 14, sequentially. Favorable consideration of this application is respectfully requested.

Respectfully submitted,

Date: May 1, 2001

By: _____

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